

head well under control between his chin and chest. (4) The thumbs, protected in the usual manner, are placed in the patient's mouth and the fingers of both hands grasp his lower jaw. The author considers that his method has the following advantages: (a) The operator has the head under perfect control and perfectly fixed; (b) the line of force exerted by the operator's hands acts in the same line as the resisting force exerted by the operator's chin; (c) the operator's elbows, being well flexed, he can exert a greater power by the force acting through the thumbs close to the shoulders; the terminal phalanges will be found to have greater muscular power; (d) the patient's head is in a better position for reducing the dislocation; and (e) the operator needs no assistant, and does not inconvenience his patient by excessive pushing and pulling the head about during the reduction.—*London Lancet*, February 25, 1893.

JAMES E. PILCHER (U. S. Army).

CHEST AND ABDOMEN.

I. A New Method of Opening the Thoracic Cavity.

By DR. DELORME (Paris). Delorme proposes a new method of opening the thorax in place of Estlander's operation. A flap is formed of the soft parts and the ribs, which is laid over to one side, thus giving greater access to the field of operation. After the operation one has only to replace the flap and suture it in its place. By means of an incision which forms the three borders of a right angle, a flap is made posteriorly with its base above and running from the third to the sixth rib, its upper and lower borders being parallel with the margins of the ribs and extending from the sternal border of the scapula to within two fingers breadth of the outer side of the sternum. At the anterior border of this flap the ribs and intercostal muscles are cut through, while at the posterior the ribs are but slightly cut and the intercostals left intact. After the upper and lower borders are freed the flap is laid over to one side. The writer first used this method in a case where a patient suffered from a tuberculous abscess of the left thoracic cavity which extended far into that cavity. As excision of the external pus cavity and curretting of the internal

diverticle was insufficient he tried this procedure. He then easily could excise the thickened wall, corresponding to the costal pleura, as well as the fungous cavity that involved the left lung and the pericardium. This method is also of service in obliterating cavities which remain after empyema operations, as experiments on the cadaver have demonstrated. In conditions where resection is now done it will be useful, and especially in the treatment of hæmorrhages of the lungs and pneumothorax after injuries. The advantages of the method in traumatic hæmorrhages of the lungs were distinctly shown in the case of an officer who, in an attempt at suicide, had stabbed himself three times in the chest with a double-edged amputating knife. The writer was called to him on the third day and found him greatly reduced in consequence of repeated hæmorrhages, thread-like pulse, hurried respiration, great anæmia, etc. After opening the thorax three bleeding wounds in the lung were found and secured. A fourth bleeding point was discovered in the pericardium and secured by the hæmostatic forceps. Unfortunately, the patient died soon after operation, in consequence of being so weakened from the hæmorrhages. At the autopsy all the wounds were found to be obliterated, so that it is safe to assume that an earlier intervention would have saved him—*Wiener medizinische Presse*, No. 15, 1893.

II. Contribution to Pulmonary Surgery. By Prof. I. HOFMOKL (Vienna). Since pulmonary surgery, with the more comprehensive works of Hallister, Fenger and E. Bull, has begun to be more systematically considered, there has accumulated quite a quantity of casuistic material. Tizebicki, of Prof. Hofmokl's clinic, presents the following statistics :

	Total No. Cases.	Cures.	With Fistula.	Unimproved.	Dead.	Result Unknown.
(1) Abscess of the Lung,	42	14	3	—	24	1
(2) Pulm. Gangrene,	24	7	1	1	13	2
(3) Tuberc. Cavities,	24	5	—	5	9	5
(4) Bronchiectatic Cavities,	12	—	—	1	8	3
(5) Echinococcus of the Lung,	45	37	1	—	6	1
(6) Pneumectomy (Resections),	5	1	—	—	—	4

Among the cases of tuberculous pulmonary cavities one died after three years of tuberculosis. To these cases are to be added two more from Hofmokl's clinic, a pulmonary abscess, following an acute right-sided pleuropneumonia and a case of putrid bronchitis, both with recovery. Hofmokl advises preliminary resection of a rib in order to have room to operate. The focus should be opened with the thermocautery, with which the hæmorrhage is slighter.—*Wiener medicinische Presse*, No. 48, 49, 1892.

III. Hysteric Tumors of the Mammary Gland. By GILLES DE LE TOURETTE (Paris). Gilles de la Tourette divides the mammary hysteric manifestations into two principal varieties: A diffuse, extensive swelling or localized tumor. In general, they are characterized by a marked superficial hyperæsthesia which is peculiar to these growths. Even the slightest touch, or even grazing them, is insupportably painful. This zone of hyperæsthesia is also hysterogenic; then pressure will bring about an attack. The œdema which accumulates around the tumefaction may give rise to ulcerations, and, in this condition, the analogy, with a malignant tumor, is still greater; indeed, cases are known where they have been operated upon. As to the treatment, compression will have no influence, and only treatment of the hysteria will bring about a cure.—*La Semaine Médicale*, No. 23, 1893.

IV. On the Indications for Laparotomy in Ileus. By H. SCHLANGE (Berlin). The writer, after demonstration of a patient, before the Berlin Surgical Society, on whom he had performed laparotomy for acute ileus, with subsequent primary resection of a piece of intestine 135 cm. in length, considers the indications for operation in ileus. He points out the importance of individualizing each case, and that to-day no one is justified in calling himself an adherent exclusively of either operative interference nor of treatment by opium, in all cases, on the other hand. He divides the cases into three classes:

1. If the abdomen is found to be more or less distended, the

intestinal convolutions visible externally, while peristaltic movements are noticed to be present, either spontaneously or from mechanical impression, as from percussion of the abdomen, or if, on auscultation sounds are heard, then it is safe to assume that there is no diffuse peritonitis present, which always paralyses the intestine and prevents peristalsis. Rather should one suspect a local intestinal trouble that impedes peristalsis, and, though the cause is often difficult to determine, laparotomy is indicated when the symptoms appear suddenly, and are obstinately persistent. It is safe, then, to suspect that a convolution of the small intestine is involved, for example, incarceration of a short loop in the true pelvis, obturator hernia. etc. If, on the contrary, the symptoms have developed slowly, and are less violent, one may wait, especially when the patient has already had such attacks before. One may here suspect that there is an adhesion between the gut and the gall bladder, uterus, vermiform appendix, etc., hindering peristalsis, and which may undergo spontaneous separation.

2. If the abdomen is distended like a barrel, the intestines neither visible nor palpable, no sign of peristalsis, then there is an extensive paralysis of the intestines from diffuse peritonitis. Here an operation will offer but little chance, and laparotomy will only hasten the fatal result. At the most, one is only justified in a minor operative procedure as forming an intestinal fistula, in order to relieve the distended gut. A certain per cent. of these cases recover without operation.

3. The indications are most distinct in the third class. Here only a limited portion of the intestine is affected, while the other portions of the gut are apparently normal. The greatly distended section of intestine shows no sign of peristalsis, and is, for the moment, paralysed. Such is the picture of a grave incarceration of a large convolution of intestine by a band or from twisting on its axis, without diffuse peritonitis having supervened. The symptoms are always violent, the patient's strength decreases rapidly, and, if one will save his patient, it is only possible by means of a laparotomy quickly done.—*Berliner klinische Wochenschrift*, No. 47, 1892.

V. Statistics of Hernias Operated on in the Sahlgren Hospital at Goeteborg, Sweden, from 1883-1893. By ALRIK LIND (Goeteborg, Sweden). During these ten years 306 cases of hernia were received at this institution. Of these, 151 were reducible or irreducible hernias, and 155 incarcerated ones. Out of these, 176 were males and 150 females; in 193 the rupture was inguinal and 107 crural. A radical operation was done in the reducible or re-irreducible cases 140 times. Two of these died, leaving a resultant mortality of $41\frac{1}{2}$ per cent. The radical operation was performed in the usual manner, by ligation of the hernia sac with catgut or silk and subsequent extirpation. In some of these cases sutures were applied to the ring, though not in all. Five were operated on after Bassini's method. In two of these the silk ligatures were cast off and fistulæ remained to retain the patients in the hospital for quite a long time. This he ascribed to imperfect sterilization of the suture material. Recurrences were observed after radical operation. After the operation he advises caution in leaving off the truss, especially in working persons. Small children appear to bear this operation better than adults. Eighteen children under three years were among those operated on, and out of these there were one infant of five months and one of seven months. Two children of two and a half years and three years respectively, were operated on for a double-sided hernia at one séance. These cases varied from the slightest to the very gravest. Among the unusual ones was a eleven-year-old girl, with a double congenital inguino-ovarial hernia. The hernial sacs were bound down to the labia majora by means of very resistant and strong bands. The ovaries were fastened to a very narrow and thin pedicle, which was closely adherent to the posterior portion of the inguinal canal, and reaching from the inner to the outer ring. This was not separated, but as soon as the restraining bands at the labia majora were severed, they retracted into the inguinal canals, and the outer ring, could be sutured. The result was good, though the patient was obliged to wear a truss. Among the other contents of hernial sacs were the cæcum, Fallopian tube, vermiform appendix,

etc. Three cases of umbilical hernia in new-born children were operated upon; two of these, in whom various organs were adherent to the hernial sac, died, while the third survived. During these ten years 155 persons were under treatment for incarcerated hernia. Of these 33 died (21 per cent.). In 22 the hernia was reduced by taxis or other non-operative measures. One of these died of intestinal gangrene. The other 133 underwent operation. Of these, 32 died (24 per cent.). In 12 cases the cause of death was peritonitis; in 7, ileus; in 4, pneumonia; in 1, enteritis; in 2, heart affections, and in 5 no cause was to be discovered. During the last four years the mortality rate was 18½ per cent., while the last two years gives one of 9½ per cent., which difference is due to the public having gained more confidence in the treatment at the hospital and entering earlier. Out of those operated upon, 67 had reached the sixtieth to the eightieth year. Several of the patients had entered after the incarceration has lasted six to eight days, yet some of those died who had been brought in on the first or second day; in these the incarceration had been so severe that gangrene set in. In all, gangrene was observed in 28 cases. The mortality seems to have fallen during latter years; for example, in 1891 only one case of twenty herniotomies for incarceration died.—*Hygiea*, No. 2, 1893.

FRANK H. PRITCHARD (Norwalk, Ohio).

VI. Strangulated Inguinal Hernia in an Infant Eight Months of Age. By J. D. T. RECKITT, M.R.C.S. (British Army). A male subject of congenital left inguinal hernia, aged eight months, presented a pale, pinched countenance and great pain, with the hernia irreducible; taxis, fomentations, enemata and other means of reduction failed. Then, under chloroform, the sac was opened, and though the finger could be run all around the inside the usual amount of fluid did not escape. A small cut was then made into a part of the next covering of the hernia, which gave immediate exit to the fluid previously expected, and on laying this sac freely open the bowel was exposed. The stricture was very tight, and notched with

difficulty on account of the patient's tender age, but when done the bowel was easily returned. On account of poor light and a tendency of the testicle to jump up into the wound whenever traction was made with the forceps, but little of the sac was excised. A radical cure was also abandoned on account of the dangerous proximity and uncertain position in such a light of the spermatic vessels and cord. The edges of both sacs were drawn together with the integuments by silver wire and the wound dressed. The patient made a good recovery. The points of interest in the case are the tender age of the subject and the two sacs, the former the cause of the latter.—*London Lancet*, March 18, 1893.

VII. Re-Union of Colon by Simple Suture after Exsection. By FREDERICK TREVES, F.R.C.S. (London). A woman, aged forty-four, with a history of several attacks of intestinal obstruction during the previous year, had been treated for stricture of the large intestine by enemata, aperients and diet, by which an enormous quantity of fæces was evacuated and his patient relieved. The relief was but temporary, the need for aperients became more pressing, and severe obstructive attacks more frequent; pain became a factor, enemata produced but little effect, and the abdomen was greatly distended with ascitic fluid. The abdomen was opened, a diagnosis of epithelioma being made from the absence of symptoms of simple intestinal stricture, and after the escape of a large bucketful of ascitic fluid, an annular epitheliomatous growth was found on the summit of the sigmoid flexure, presenting the usual simple ring, with no adhesions to adjacent parts, and no extension beyond the bowel. The abdomen having been freed of all ascitic fluid, the affected loop of bowel was drawn out of the wound and numerous sponges were wedged around it so as to make the operation in every respect extra-abdominal. Involving an inch and a half of the colon, the gut above was greatly hypertrophied and so distended as to equal the adult forearm in circumference and below thin, empty and contracted. The colon above and below was clamped by an assistant's fingers, and

seven inches of the sigmoid flexure and a V-shaped portion of the mesocolon cut away with scissors, the contents of the segment being received upon a special sponge. The interior of the bowel was cleaned and the gap in the sigmoid mesentery closed by two silk sutures. Next, the divided end of the greatly distended upper segment was partly closed, so that its lower part should correspond to the lumen of the collapsed bowel below, by means of a continuous suture of the mucous membrane followed by an outer line of Lembert's sutures; for each suture, No. 1 silk braid was employed, a milliner's needle being used for the continuous, and a small round Hagedorn's needle for the interrupted sutures; the upper segment of the bowel was as rigid as if made of leather. The two ends of the gut were now joined together in the same way, a colleague inserting the stitches in one end while the operator was introducing them at the other, about fifty stitches being employed. Relaxation of the assistant's fingers allowed the contents of the bowel to pass through, showing that the suture line was water-tight at all points. The abdominal wound was closed and dressed in the usual way and the patient passed on to recovery, the bowels moving first on the third day, when five liquid motions were passed.—*London Lancet*, March 11, 1893.

VIII. Acute Inflammation of the Gall Bladder Closely Simulating Acute Intestinal Obstruction. By W. ARBUTHNOT LANE, M.S. (London). A man, aged fifty-four, had suffered from many attacks of bronchitis and gout, and had suffered previous attacks of abdominal pain. He was seized with a sudden severe abdominal pain, accompanied by vomiting, which became less frequent and ceased on the following day. The bowels would not move, and his pain was incessant, which, with some distention, was rather more apparent on the right side. After four days he was in a very prostrate condition, with a small, rapid pulse and a very distended, painful and tender abdomen, the hardness and fulness being most distinct about the right hypochondriac region. No evidence could be obtained of biliary colic or previous trouble in his gall bladder, of

attacks of intestinal obstruction, and nothing wrong could be detected in the right iliac region, although the cæcum and the small intestine were greatly distended. There was no sign of distension of the colon to the right of the median line. With a diagnosis of obstruction of the large intestine immediately beyond the hepatic flexure, the abdomen was opened, exposing a very thick layer of firm lymph covering the edge of the liver and extending down over the adjacent transverse colon; beyond this the colon was empty, while the transverse colon was much distended. Removal of the intimately adherent lymph from the transverse colon showed the duodenum beneath covered with the same cake of inflammatory material, and in immediate relation with both these structures and covered by the same mass of lymph was found a tensely distended gall bladder, not larger than usual, but very acutely inflamed. The whole of the lymph was carefully removed, and the gall bladder was tapped, giving exit to a quantity of thick muco-pus; no stone was found. The wound was closed, the gall bladder drained, and the patient made an uninterrupted recovery. The acute onset of the symptoms in the case is difficult to explain. A point of much interest was the peculiar local action of the lymph in paralyzing the transverse colon and duodenum and preventing the passage of the intestinal contents through the affected part.

The author refers to another, but less severe case which he had since observed in a woman, aged seventy-two, in whom a history of attacks of indigestion and other symptoms of distended gall bladder, recurring for many years, made the diagnosis easy; though she did not refer her pain to the location of the gall bladder, the organ could be distinctly felt and was very tender.—*London Lancet*, February 25, 1893.

JAMES E. PILCHER (U. S. Army).

IX. Surgical Affections of the Gall Bladder and Bile Ducts. By A. W. MAYO ROBSON (Leeds). The author has operated on more than fifty cases of cholelithiasis, and among the complications and dangers for which help has been sought have been :

Repeated attacks of biliary colic, so-called "spasms," without jaundice.

Biliary colic with persistent jaundice and its consequences, such as hæmorrhage.

Intermittent pyrexia, with jaundice and pain.

Persistent vomiting, with such serious digestive disturbances as to threaten death from inanition or exhaustion.

Acute intestinal obstruction due to impaction of a large gall-stone in the bowel, or to peritonitis.

Stimulation of intestinal obstruction due to irritation and pain.

Localized peritonitis, with or without ulceration of the bile passages.

Perforative peritonitis.

Septicæmia due to ulceration of bile passages.

Abscess of liver.

Empyema of gall bladder.

Dropsy of gall bladder.

Abscess of abdominal walls.

Pyelitis of right kidney, and collapse due to intense pain.

The cause of the mischief, the gall stones, may be found anywhere in the biliary tract, and although usually discovered in the gall bladder or in the cystic or common ducts, they may be found in the hepatic duct before it joins the cystic, or even in its ramifications in the liver. Where there is neither jaundice nor distension of the gall bladder, and when so-called "spasms" are frequently recurring and do not yield to medical treatment, the gall stones will usually be found in a shrunken gall bladder or in the cystic duct, but where jaundice is present the stones will probably be found in the common duct; and in either of these cases my almost invariable experience has been to find numerous and very firm adhesions, showing that the attacks have been frequently associated with local peritonitis. Where there is distension of the gall bladder, associated with pain but without jaundice, one large gall stone or several smaller ones will probably be found blocking the neck of the gall bladder and the cystic duct.

Where there is persistent jaundice, with distension of the gall bladder and without marked pain, malignant disease is to be suspected, especially if there is an absence of the intermittent pyrexia which usually coexists with the presence of gall stones in the common duct; and as operation in malignant cases is undoubtedly very much more dangerous than in simple cholelithiasis, the suspicion should be borne in mind, although in many of these cases an exploratory operation may be undertaken in the hope of finding something that can be relieved, or of relieving the cholæmia by diverting the course of the bile.

There is decidedly room for improvement in the diagnosis of cholelithiasis, especially when the question of malignant disease has to be taken into consideration; and in many cases it is almost impossible to differentiate between the mechanical blockage of the common bile duct from malignant disease which has not advanced far enough to produce cachexia, and that from gall stones; although as a rule in the latter there will be history of preliminary attacks of spasms, of pain preceding the jaundice, and of intermittent pyrexia, with absence of enlargement of the gall bladder. The last-mentioned sign is worth remembering, as all the cases of malignant disease with jaundice on which Robson operated have had distension of the gall bladder, so as to form a perceptible tumor.

For purposes of diagnosis the author advises to make a small exploratory incision, then to empty the gall bladder by the aspirator, and afterward to explore the bile passages with the fingers.

Cholecystotomy is the operation *par excellence* in the treatment of gall stones, and although, as often happens, where there are adhesions and a shrunken gall bladder, it is an operation of considerable difficulty, statistics prove that in the absence of malignant disease and persistent jaundice it is a procedure attended with little risk. Out of thirty such cases on which Robson has operated all recovered. Even in the presence of cholæmia the mortality, in the absence of malignant disease, is very small, for out of fifteen cholecystotomies for jaundice with gall stones in the absence of cancer, Robson has not lost one patient as a result of the operation.

As worthy of trial for averting danger from hæmorrhage in cholæmic cases, the author supports the use of chloride of calcium in fifteen-grain doses every four hours for two days previous to operation. Temporary drainage of the gall bladder after cholecystotomy is preferred to attempts at immediate suture.

Instead of suturing the edges of the incision in the gall bladder to the skin, Robson fixes it to the aponeurotic layer of the abdominal wall, and thus lessens the danger of a fistula, as between the opening in the gall bladder and the skin is a layer of tissue which soon becomes covered with granulations, and the contraction in healing usually secures closure.

Drainage of the gall bladder not only presents the advantage of treating the vesical catarrh by securing physiological rest, but in case the ducts have not been cleared it becomes possible to apply through the fistula hot water or some solvent solution directly to the concretions. Where the gall bladder is shrunken and cannot be brought to the surface, often it is possible to tuck the parietal peritonæum down, and suture it to the margins of the incision in the viscus, but where this cannot be done then the surgeon utilizes the omentum, suturing it to the gall bladder and to the parietal peritonæum, thus occluding the peritoneal cavity. Where occlusion in this way cannot be effected, the insertion of a drainage tube into the gall bladder without suture of the margins to the wound seems to be efficient, for it is apparently easier, on account of intra-abdominal tension, for effused fluids to discharge directly through the tube than to pass among the viscera; and probably within forty-eight hours the drainage track from the gall bladder to the surface is quite formed, and no longer communicates with the general cavity of the peritonæum. In clearing the ducts of concretions, the surgeon must be guided by circumstances; as a rule, forceps within the duct and the fingers outside will overcome any difficulty in the cystic duct, and occasionally stones may be worked backward by the fingers even from the common duct.

Not infrequently the common or even at times the deeper part

of the cystic duct cannot be cleared in this way, and then cholelithotripsy may be attempted. In a number of cases the author has crushed stones in the ducts, and afterward found the fragments in the motions. He first tries to crush them between the finger and thumb, and failing this employs forceps covered with india rubber. At times this method will fail, when incision of the duct and removal of the concretion may be done; the opening in the duct being sutured, and the right kidney pouch drained. In two cases Robson found the gall bladder displaced, and projecting into the right loin, as if the liver had been rotated to the right. In both of them he was able to crush the stones, and clear the ducts without opening the shrunken gall bladder, that is, to perform cholelithotripsy without cholecystotomy.

The following conditions are indications for cholecystotomy :

(1) In frequently recurring biliary colic without jaundice, where medical treatment has failed.

(2) In persistent jaundice, where the onset was ushered in with pain, and where recurring pains, with or without ague-like attacks, render it probable that the cause is gall stones in the common duct.

(3) In distended gall bladder from impaction of calculi in the ducts.

(4) In empyema of the gall bladder.

(5) In persistent jaundice with enlargement of the gall bladder dependent on some obstruction in the common duct, even where the cause cannot be clearly made out, but in such cases the increased risk should be borne in mind, as malignant disease may not improbably be the cause of the obstruction.

Cholecystectomy.—Robson has had three cases in which cholecystectomy had to be done in consequence of stricture of the cystic duct leading to an accumulation of mucus in the gall bladder, and distress when the fistula was allowed to close. After removal of the gall bladder complete recovery ensued in all. The operation is not difficult, and in his last case a single fine silk ligature around the cystic duct answered quite as well as the more complicated procedures.

Cholecystectomy for cancer can very seldom be called for.

The following conditions are indications for removal of the gall bladder :

(1) Where, after cholecystotomy, a mucous fistula persists, dependent on stricture of the cystic duct.

(2) Where, under similar circumstances, owing to accumulation of fluid in the gall bladder, the pain recurs as soon as the fistula has closed.

(3) In cancer, if the disease be limited to the gall bladder.

Wherever there is obstructive jaundice, cholecystectomy is contra-indicated.

Cholecystenterostomy, though not an easy operation, seems to be a successful one, for, out of eight reported cases, seven recovered. In the only case of cholecystenterostomy performed by the author in 1889 for biliary fistula, due to stricture of the common duct, the patient is at present in excellent health.

The author suggests the use of a small decalcified bone tube, like a spool for thread, in facilitating the union of the gall bladder and intestine, the tube being introduced into an opening in each viscus while the membranous margins are sutured by a double row of continuous suture.

The indications for cholecystenterostomy are :

(1) In closure of the common duct from stricture where the jaundice is and must be persistent, unless another channel for the bile can be made.

(2) In tumor producing obliteration of the lumen of the common duct, thus leading to persistent jaundice, but if the tumor be made out to be malignant the simpler procedure of cholecystotomy had better be performed.

(3) In cases where the gall bladder is distended and it is found impossible or impracticable to clear the common duct of gall stones.

—*British Medical Journal*, April 15, 1893.

X. Removal of Appendix for Relief of Chronic Relapsing Appendicitis. By WILLIAM T. BULL (New York). The author reports twelve cases, all of whom were in other respects in

good health. In addition to the history of repeated attacks, eight cases have presented evident tumors in the iliac fossa, of varying position and distinctness. The tumor was more distinct the nearer the time of examination approached the subsidence of the last attack. In four cases there was no tumor, but a tender area corresponding roughly to the point emphasized by McBurney as of diagnostic value. Once only the loin was tender. But all the patients without a distinctly palpable tumor had a history of continuous discomfort, or pain on exertion, with or without regularity in the action of the bowels. Four patients were never entirely well after the first attack. In one of these the indurated mass, six weeks after the onset of the second attack, was as large as the fist, and plainly to be felt by rectum. Four months later, at time of operation, it was as large as the thumb. Two patients were unwilling to travel, convinced by previous experience that their pleasure would be frequently interrupted, and apprehensive of the increased severity of future attacks; six patients were unable to pursue business, or laborious occupations, or to go to school without frequent abdominal discomfort. The duration of the disease extended over a period from one to ten years, covering a number of attacks from two to twenty or thirty. When the number of relapses was fewest, their character has been unusually severe and followed by protracted convalescence. Two cases were practically disabled from the occurrence of the first attack, every effort to move about being attended with pain and some digestive disturbance, and progressive loss of flesh and strength. In brief, all cases presented features of a chronic inflammation of the appendix with relapses.

The condition of the appendix varied much. In all cases but one inspection demonstrated the existence of chronic inflammation of all the coats, as shown by abnormal thickening and stiffness of the tube. Adhesions of varying density fixed the appendix in different situations; behind the cæcum or in the iliac fossa, in five cases; to the anterior abdominal wall, with the help of the omentum, in two cases; to the cæcum itself, or the ileum, in four cases; and once its

tip was free. Change in the axis of the appendix was noted in five instances, it being sharply bent on itself, besides being adherent. Ulceration of the mucous membrane was noticed at the site of the bend in one case. In two cases there was a decided constriction and dilatation beyond the bend, and four presented perforations, with the same number of small purulent collections. But only one faecal concretion was found. Once the lumen was entirely obliterated. In only one instance was the caecal end occluded.

All but one of the patients were men. Eight were between twenty-five and forty years of age; two were under twenty; two were over forty. One died from general peritonitis referable to infection from a small pus focus found behind the caecum, which was cleaned and disinfected, but not subsequently drained. In the remaining eleven cases all symptoms disappeared, and the patients were relieved from discomfort and anxiety.

The author believes that patients are in more danger from the continuance of the disease than from the operation performed in the quiescent period. He prefers to explore the appendix by an oblique incision, beginning about an inch above the middle of Poupart's ligament and extending three or four inches upward and outward.

Adhesions must be torn through with care, and cut only when very dense. The caecum, when freed from adhesions, can usually be rolled over inside the cavity and retained in different positions with sponges, so as to present all its aspects. It is undesirable and rarely necessary to pull it above the level of the edges of the wound. The appendix, recognized sometimes by touch only, is freed and ligated a quarter of an inch from the caecum with two catgut ligatures, and cut between them. Another ligature embraces whatever exists of its mesentery. It is removed by cutting through the mesentery beyond this ligature. The caecum is wedged about with sponges, the ligature removed from the appendix stump, the mucous coat pulled out with a hook, and its lumen constricted with a fine silk suture or ligature. The peritoneal coat is to be pushed back from it, and the tied tip pushed back (inverted) into the lumen of the caecum. This inverts

the peritoneal coat as well, and three or four Lembert sutures of fine silk through the adjacent wall of the cæcum close the circular opening in a longitudinal direction. This is the most perfect method of disposing of the appendix stump. It is not always feasible, because of the thickness and cohesion of the coats. Under these circumstances the stump may be ligated with catgut, then depressed, and the cæcal walls closed over it with Lembert sutures. Use may be made of adjacent bits of meso-appendix or omentum, secured by catgut sutures to make this closure more effective. Iodoform should be dusted along the suture line. All bleeding must be stopped. A tent of iodoform gauze is to be used only when pus has been encountered. The abdominal wound should be sutured in layers, one each of catgut through the peritonæum and aponeurosis, the other of silk-worm gut through all the layers except the peritonæum.—*Medical Record*, March 18, 1893.

XI. The Question of Operation for Relief of Relapsing Typhlitis, with Report of Fourteen Cases. By F. TREVES (London). The author, after discussing the anatomical conditions found in the great majority of cases of typhlitis, which he ranks under the four heads of: (1) moderate torsion of the appendix; (2) external torsion of the appendix; (3) lodgment of a foreign body in the appendix, and (4) primary ulceration of the appendix, discusses briefly the clinical manifestations of the disease, and closes his paper with details of fourteen hitherto unpublished cases in which he has operated for the relief of relapsing cases. These cases are preceded by the following summary of his views and practice in such cases: He thinks that the circumstances which would justify an operation in these cases must be precisely defined. It cannot be too emphatically stated that, in a fair proportion of instances in which the trouble has relapsed, no surgical interference is called for.

He is aware of many cases in which a patient has had three or more attacks of typhlitis, and has then ceased to be troubled with further outbreaks. In some examples of the relapsing form much

can be done by medical means, by diet, by attention to the bowels, and by placing the patient under conditions more favorable to a state of peace within the abdomen.

The operation alluded to consists, it is needless to say, in the removal of the offending organ—the appendix. He first proposed this operation, which should be carried out during a quiescent period, in 1877, in a paper read before the Royal Medical and Chirurgical Society. Since that date the procedure has been performed in a great number of cases and not always with proper discrimination.

The following are the more important circumstances which would justify an operation, and in all the cases with which he has dealt one or other of the subjoined conditions has been present.

(1) The attacks have been very numerous (in one case there had been nineteen relapses).

(2) The attacks are increasing in frequency and severity.

(3) The last attack has been so severe as to place the patient's life in considerable danger.

(4) The constant relapses have reduced the patient to the condition of a chronic invalid, and have rendered him unfit to follow any occupation.

(5) Owing to the persistence of certain local symptoms during the quiescent period there is a probability that a collection of pus exists in or about the appendix.

He has never operated in any case in which he has not been able to make out the enlarged appendix still in evidence after the acute symptoms have passed away.

It may be safe to argue that the pain and distress involved by the operation will be less than that attending any but a slight attack, and that the risk of the procedure is less than that associated with an outbreak of typhlitis considered generally. In none of the cases in which he has removed the appendix during a quiescent period for relapsing typhlitis has the patient done other than make a sound recovery.

The Details of the Operation.—The procedure is carried out

during a quiescent period, and after all the acute symptoms have subsided. The position of the appendix must be made out, and upon its site the place of the incision will, to a great extent, depend. In the larger proportion of cases an oblique inguinal incision answers well. An imaginary line is drawn from the anterior superior iliac spine to the umbilicus. The incision is about two inches in length, is placed at right angles to this line, and at a point about two inches from the spinous process. The centre of the incision corresponds to the line. The abdominal cavity is opened, and the appendix is exposed. Adhesions are dealt with in the usual way. If the little process be found to be very closely adherent to such a viscus as the ileum or bladder it is better to cut it off close to its attachment, and then to pare away the fragment still left adhering.

In dealing with the appendix it is well, whenever possible, to make a circular cut through the peritonæum just on the distal side of the spot at which it is intended to sever the process. The peritonæum thus freed is turned back, as is the skin in a circular amputation. The appendix is cut across at the line of the reflected peritonæum. The mucous membrane which presents is scraped away with a sharp spoon. The muscular wall of the appendix is then brought together by means of a continuous suture of No. 1 silk braid. Over the stump thus formed the reflected peritonæum is drawn and secured in place by means of a few points of Lembert's suture. It is needless to say that this procedure is not always possible. The tube may have to be occluded by means of a single ligature, but an attempt should always be made to give to the stump a covering of peritonæum. If the appendix be cut off close to the cæcum, it is sometimes possible to cover the divided end with a flap of peritonæum drawn from the cæcum. In other instances the serous covering required may be derived from that lying over the iliac fossa. In only one instance has he ever found a drainage tube necessary. In two cases, both of which have been already published, he failed to remove the process. The wound in the parietal peritonæum is finally brought together by means of a continuous suture of No. 1 silk braid passed with a

milliner's needle. The rest of the wound in the parietes is closed by silkworm gut sutures. The patient should remain in bed for a full period of twenty-one days.—*British Medical Journal*, April 22, 1893.

XII. An Analysis of Sixty-eight Cases of Appendicitis.

By GILBERT BARLING, F.R.C.S. (Birmingham). The author has collected and examined all the cases diagnosed as typhlitis and perityphlitis or appendicitis admitted into the General Hospital, Birmingham, during a period of seven years, beginning in 1885. The total is sixty-eight cases—some of them so mild as to recover in a few days, others requiring weeks, and even then relapsing, a few with well-defined suppuration, and several of the fulminating kind; some of these last perfectly moribund when admitted.

Of the sixty-eight cases seven died, a mortality of 10.3 per cent. In forty of the sixty-eight, well-marked tumor was palpated in the right iliac fossa; in some of the others tumor probably existed, but the tenderness was so extreme that muscular resistance prevented a thorough examination. With regard to this absence of tumor, it is worth noting that in the most acute perforative cases tumor is only once mentioned, but these were nearly all late cases with distension and extreme tenderness, so that the obstacles to examination were unusually great. Another and rather remarkable point illustrated is that of the forty cases with tumor only four had well-marked abscess; all the others with one exception, a relapsing case operated on, recovered without suppuration. Only twice were redness and œdema noticed—once in a case which recovered without suppuration; in the other, a perforation of the cæcum, there was a well-formed abscess. In three out of the four patients with well-defined abscess of considerable extent, these two characters, redness and cedema, were absent. In two of the four abscesses fluctuation could be detected; in the two others it could not, the reason being, as operation showed, the extremely dense thickening of the abdominal wall over the pus collection.

The proportion of cases which relapse has been most variously estimated; of the sixty-eight patients here under consideration, five relapsed, three of them twice, one three times, and one four times. Of course, some others may have relapsed and found their way to other institutions, but one's general experience of acute conditions such as this is that the patient returns if he feels ill again.

Of those who relapsed, five in number, four eventually recovered to all appearance completely; the fifth was operated on and died. Of his case it is only right to say that the operation was done some years ago, before the modern procedure was formulated, and that under the same conditions now the result would probably be a more fortunate one.

The cases dying, seven in number, form the most interesting group in the statistics. One, a youth, aged seventeen, had a perforating ulcer of the cæcum setting up suppuration, the abscess subsequently bursting into the general peritoneal cavity and causing death. This case occurred in 1885, and has already been put on record. It is reasonable to say of it that at the present time it would certainly be operated on with every expectation of success.

In the remaining six patients the appendix was the starting point of disaster. One of them has already been referred to as a relapsing case. He was operated upon before the modern operation had been formulated, and no abscess being discovered, the incision was closed, except an exit for a drainage tube. Death occurred from peritonitis, and at the necropsy the appendix was found rather dilated, and containing three small concretions. In the remaining five cases the appendix was perforated, but in only one instance was there a concretion. All the patients were males, and their ages were respectively 12, 15, 19, 24, 30 and 35. All died from peritonitis, one due to the rupturing of a small abscess cavity; in the other instances the septic mischief appears to have spread directly from the inflamed appendix. In three cases out of the five the patients were admitted with advanced general peritonitis, without any very distinct evidence as to its starting point, and although section was performed on them, twice in the

middle line and once over the right iliac region, the peritonitis was too advanced for any hope of a successful issue. In one of the cases remaining there was a basic empyema, and practically no evidence pointing to the condition of the appendix; in the fifth and last, the symptoms were those of mild peritonitis, without any evidence pointing to the cæcal region as its starting point.—*Brit. Med. Jour.*, April 22, 1893.

EXTREMITIES.

I. Rupture of the Patellar Attachment of the Left Quadriceps Extensor Cruris. By J. W. BAWDEN, M.D. (London). A man, aged sixty-nine, slipped, falling backward with his leg under him, and, although he had no pain was unable to rise or to straighten his leg. Examination demonstrated that the patella and its ligament hung loose under the integuments. The extensor muscles were retracted, leaving a space of about three inches between the upper edge of the patella and the sharp lower end of the ruptured muscular attachment. The limb was treated by extending it to the utmost, then pulling the skin downward over the knee, at the same time pressing the patella upward as far as possible, and strapping it into position with plaster; next, the ruptured muscles were treated in the same manner, and the parts brought together as nearly as possible. The limb was then flexed sufficiently to be comfortable, fixed on a back splint, and swung from a cradle; the space between the torn edges of the tendon was now but about half an inch. After three weeks the straps were removed, but applied again for two weeks more. The joint was then supported in plaster-of-Paris for a month, after which a leather knee-cap was worn. The patient recovered good use of the limb, limping slightly only. The author considers hypertrophy of the muscles and bones of the knee due to the patient's occupation, with later muscular degeneration, to be the predisposing cause of the accident.—*London Lancet*, February 11, 1893.